AMENDMENT TO THE CLAIMS

- (Withdrawn) An isolated polynucleotide molecule derivable from a polynucleotide encoding a polypeptide having L-sorbosone dehydrogenase activity comprising a partial nucleotide sequence of at least 20 consecutive nucleotides of SEO ID NO:1.
- (Withdrawn) The isolated polynucleotide molecule according to claim 1, wherein the partial nucleotide sequence of SEQ ID NO:1 has at least 50 consecutive nucleotides.
- 3. (Withdrawn) The isolated polynucleotide molecule according to claim 1, wherein the partial nucleotide sequence of SEQ ID NO:1 has at least 100 consecutive nucleotides.
- 4. (Withdrawn) The isolated polynucleotide according to claim 3 wherein the partial nucleotide sequence is derivable from a polynucleotide sequence having a homology of at least 60% with SEQ ID NO:1 whereby at least 100 consecutive nucleotides are compared.
- 5. (Withdrawn) The isolated polynucleotide molecule according to claim 1, whereby the partial nucleotide sequence is derivable from a polynucleotide sequence having a homology of at least 80% with SEO ID NO:1.
- 6. (Withdrawn) The isolated polynucleotide molecule according to claim 1, whereby the partial nucleotide sequence is derivable from a polynucleotide sequence having a homology of at least 90% with SEO ID NO:1.
- 7. (Withdrawn) The isolated polynucleotide molecule according to claim 1, which is selected from the group consisting of SEQ NOs:1, 11, 13, 15, 17, 19, 21 and 26.
- 8. (Withdrawn) The isolated polynucleotide molecule according to claim 1, wherein the partial nucleotide sequence is selected from the group consisting of SEQ ID NOs:5, 6, 7, 8, 9, 10, 23, and 24.

- 9. (Currently amended) An isolated polypeptide having L-sorbosone dehydrogenase activity comprising: (i) SEQ ID NO: [[2]] 16; or (ii) an amino acid sequence derivable from SEQ ID NO: [[2]] 16 by addition, deletion, insertion, or a conservative substitution of one or more amino acids in the amino acid sequence of SEQ ID NO: [[2]] 16, wherein the conservative substitution is selected from the following substitution: Ala to Val/Leu/Ile, Arg to Lys/Gln/Asn, Asn to Gln/His/Lys/Arg, Asp to Glu, Cys to Ser, Gln to Asn, Glu to Asp, Gly to Pro/Ala, His to Asn/Gln/Lys/Arg, Ile to Leu/Val/Met/Ala/Phe/nor Leu, Lys to Arg/Gln/Asn, Met to Leu/Phe/Ile, Phe to Leu/Val/Ile/Ala/Tyr, Pro to Ala, Ser to Thr, Thr to Ser, Trp to Tyr/Phe, Tyr to Trp/Phe/Thr/Ser, and Val to Ile/Leu/Met/Phe/Ala/nor Leu.
- 10. (Currently amended) The isolated polypeptide according to claim 9, wherein the isolated polypeptide sequence is SEO ID NO:[[2]] 16.
- 11. (Currently amended) The polypeptide according to claim 9, wherein the amino acid sequence is derivable from SEQ ID NO: [[2]] 16 by conservative substitution.
- 12. (Withdrawn) A recombinant DNA molecule for expression of a polypeptide having L-sorbosone dehydrogenase activity, said recombinant DNA molecule comprising a polynucleotide according to claim 1.
- (Withdrawn) An expression vector comprising the recombinant DNA molecule according to claim 12.
- 14. (Withdrawn) A recombinant organism which has been transformed with the recombinant DNA according to claim 12.
- 15. (Withdrawn) The recombinant organism according to claim 14, wherein the recombinant DNA is at least partially integrated into the chromosome.
- 16. (Withdrawn) The recombinant organism according to claim 14, which is selected from the group consisting of fungal, plant, animal and bacterial cells.

- 17. (Withdrawn) The recombinant organism according to claim 16, wherein the organism is a bacterium of a genus selected from the group consisting of Gluconobacter, Acetobacter, Pseudomonas and Escherichia.
- 18. (Withdrawn) A process for the production of L-ascorbic acid from a substrate selected from D-sorbitol, L-sorbose and L-sorbosone comprising: (a) propagating a recombinant organism of claim 14 in an appropriate culture medium and (b) recovering and separating L-ascorbic acid from said culture medium.
- 19. (Withdrawn) A process for the production of L-ascorbic acid from a substrate selected from D-sorbitol, L-sorbose and L-sorbosone comprising: (a) propagating a non-recombinant microorganism encoding a polypeptide according to claim 9 in an appropriate culture medium and (b) recovering and separating L-ascorbic acid from said culture medium.
- 20. (Withdrawn) A process for the production of L-ascorbic acid comprising contacting a substrate selected from D-sorbitol, L-sorbose and L-sorbosone with the isolated polypeptide of claim 9.
- 21. (Withdrawn) A process for the production of L-ascorbic acid from a substrate selected from D-sorbitol, L-sorbose and L-sorbosone comprising: (a) propagating a recombinant of organism according to claim 14 in an appropriate culture medium, (b) isolating and purifying the L-sorbosone dehydrogenase, (c) incubating the substrate in the presence of the L-sorbosone dehydrogenase of (b), and (d) recovering and separating L-ascorbic acid from the reaction mixture.
- 22. (Withdrawn) A process for the production of L-sorbosone dehydrogenase, wherein a recombinant organism comprising a polynucleotide according to claim 1 is propagated in an appropriate culture medium, the cells are disrupted and the L-sorbosone dehydrogenase is isolated.

- 23. (Withdrawn) A process for the production of L-sorbosone dehydrogenase, wherein a non-recombinant microorganism comprising a polynucleotide according to claim 1 is propagated in an appropriate culture medium, the cells are disrupted and the L-sorbosone dehydrogenase is isolated.
- 24. (Withdrawn) A process for the production of vitamin C comprising converting a substrate into vitamin C in a medium comprising resting cells of a microorganism.
- 25. (Withdrawn) The process according to claim 24 comprising the steps of: (a) culturing the microorganism under conditions which enable growth, (b) changing of the conditions such that the growth rate of the microorganism is reduced leading to resting cells; and (c) production of vitamin C from the substrate using the resting cells of (b).
- 26. (Withdrawn) The process according to claim 25 wherein steps (a) and (c) are performed in 2 or more separate vessels.
- 27. (Withdrawn) The process according to claim 25 wherein step (a) and (c) are not separated by any washing and/or isolation step.
- 28. (Withdrawn) The process according to claim 24 wherein the microorganism is grown in batch, fed-batch, continuous, or semi-continuous mode.
- 29. (Withdrawn) The process according to claim 25 wherein step (c) is performed in batch, fed-batch, continuous, or semi-continuous mode.
- 30. (Withdrawn) The process according to claim 24 wherein the density of the resting cells in the medium measured as OD at 600 nm is at least 10.
- 31. (Withdrawn) The process according to claim 24 wherein the yield of produced vitamin C is at least 1.8 g/l.

- 32. (Withdrawn) The process according to claim 24 wherein the microorganism is selected from the group consisting of yeast, algae, and bacteria.
- 33. (Withdrawn) The process according to claim 24 wherein the microorganism is selected from the group consisting of Candida, Saccharomyces, Zygosaccharomyces, Scyzosaccharomyces, Kluyveromyces, Chlorella, Gluconobacter, Acetobacter aceti, Pantoea, Cryptococcus, Pseudomonas and Escherichia.
- 34. (Withdrawn) The process according to claim 24 wherein the substrate is selected from the group consisting of D-glucose, D-sorbitol, L-sorbose, L-sorbosone, 2-keto-L-gulonate, D-gluconate, 2-keto-D-gluconate and 2,5-diketo-gluconate.
- 35. (Withdrawn) The process according to claim 24 using a microorganism capable of producing both vitamin C and 2-keto-L-gulonic acid from a substrate and wherein the ratio between the concentration of vitamin C and 2-KGA is more than 0.1.
- 36. (Withdrawn) The process according to claim 18 further comprising isolation of vitamin C from the medium and optionally one or more purification steps.
- 37. (Withdrawn) The process according to claim 36 wherein all purification steps are performed in an aqueous environment.
- 38. (Withdrawn) The process according to claim 18 further comprising separation of vitamin C from components in the medium using electrodialysis.
- 39. (Withdrawn) The process according to claim 24 further comprising separation of vitamin C from components in the medium using electrodialysis.
- 40. (Withdrawn) A recombinant organism which has been transformed with the expression vector of claim 13.

- 41. (Withdrawn) A process for the production of L-ascorbic acid from a substrate selected from D-sorbitol, L-sorbose and L-sorbosone comprising: (a) propagating a non-recombinant microorganism encoding the polypeptide according to claim 9 in an appropriate culture medium, (b) isolating and purifying the L-sorbosone dehydrogenase, (c) incubating the substrate in the presence of the L-sorbosone dehydrogenase of (b), and (d) recovering and separating L-ascorbic acid from the reaction mixture.
- 42. (Withdrawn) The process according to claim 24 further comprising isolation of vitamin C from the medium and optionally one or more purification steps.